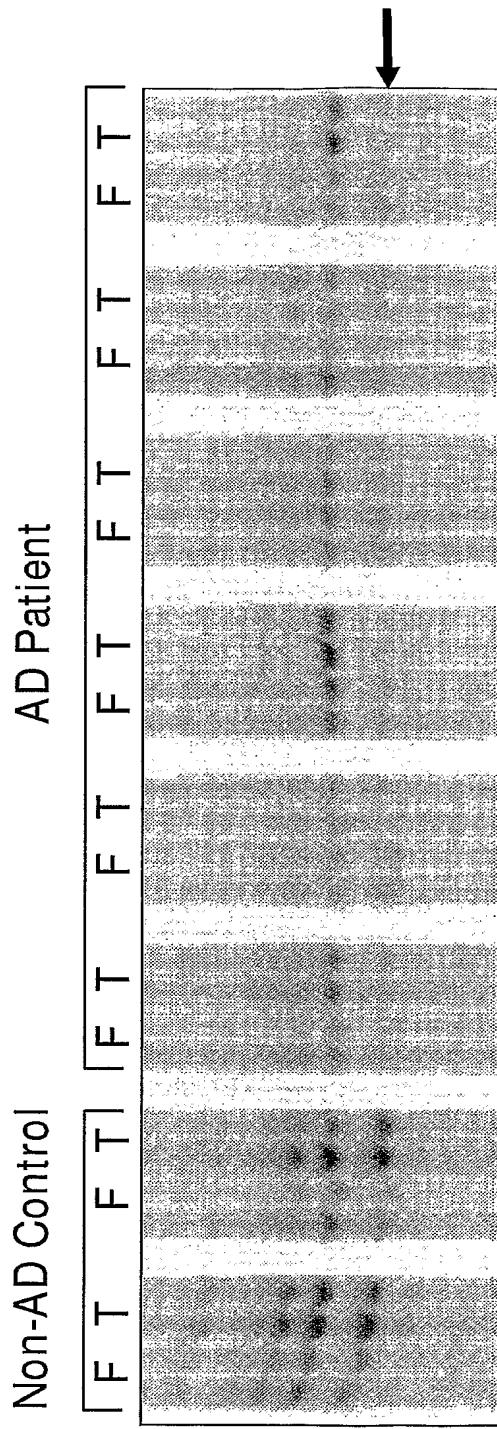


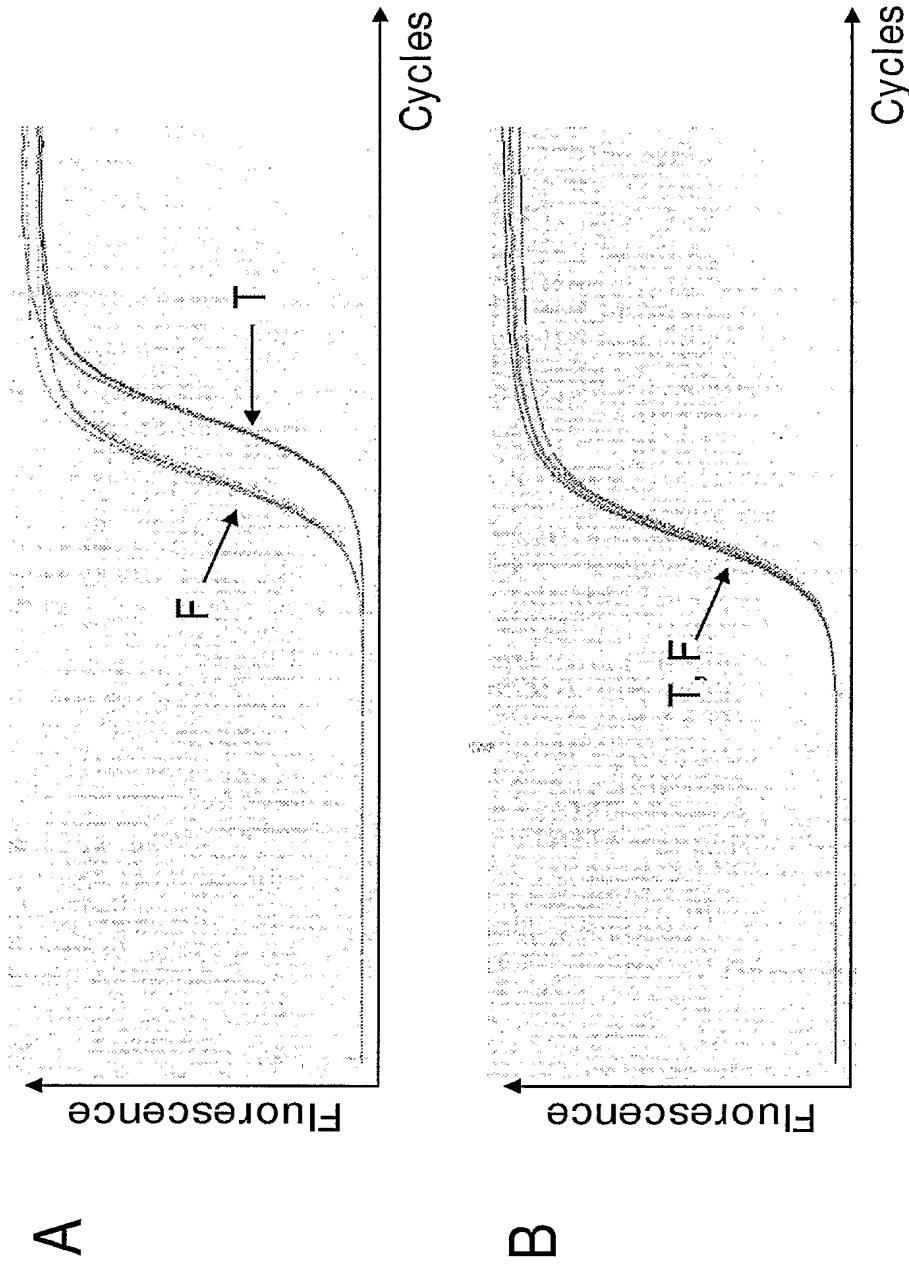
- 1 / 16 -

Fig. 1: Identification of differentially expressed genes in a fluorescence differential display screen



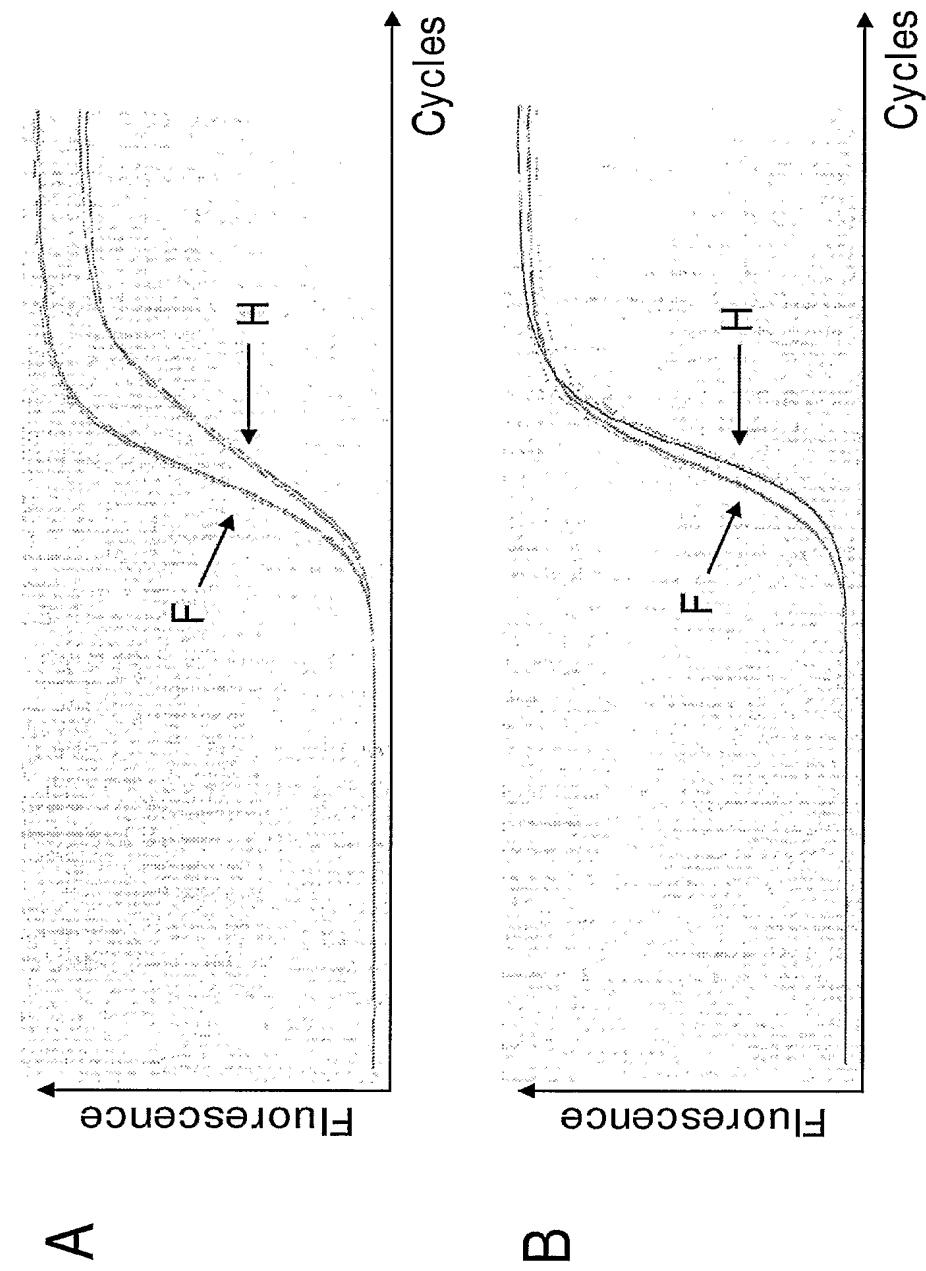
-2/ 16 -

Fig. 2: Verification of differential expression
of human MAL2 by quantitative RT-PCR



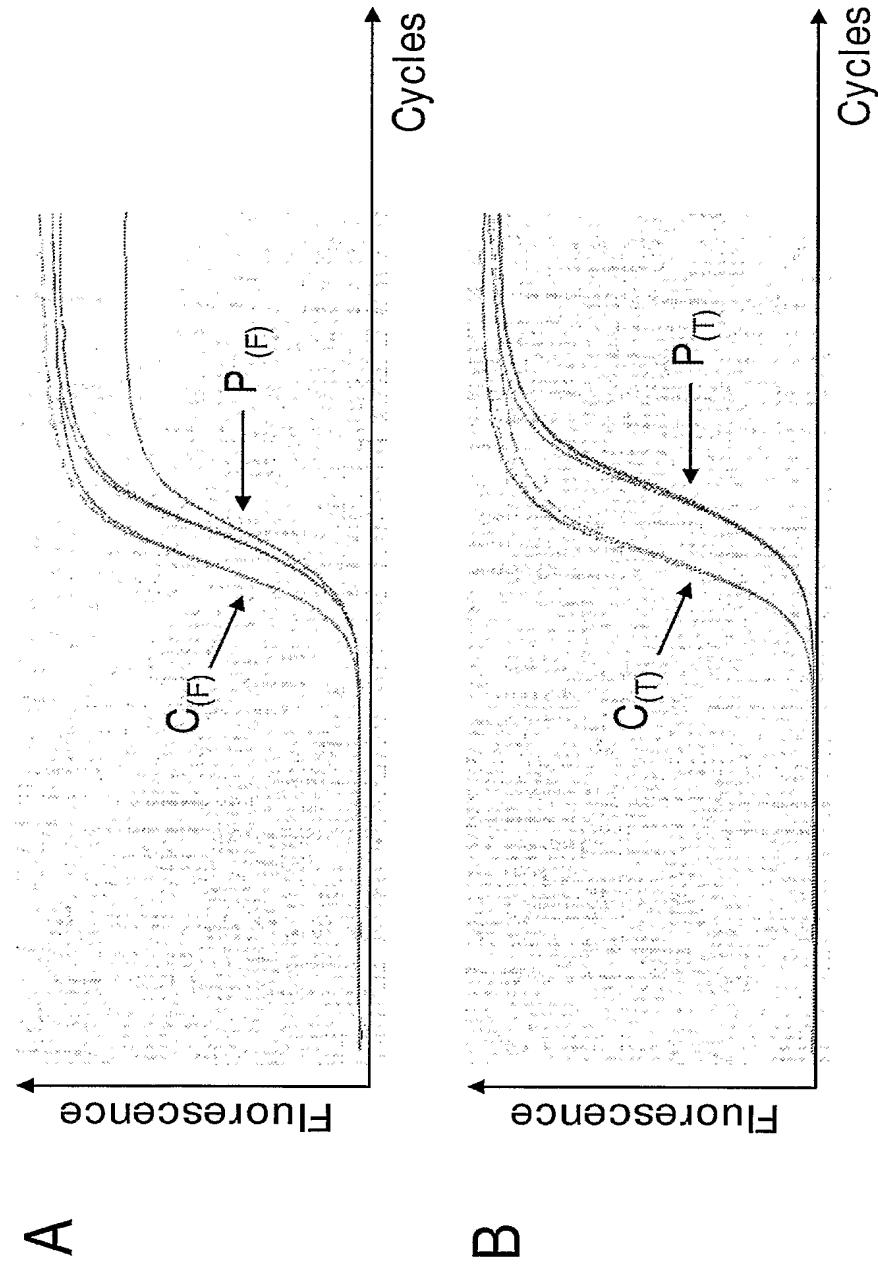
-3 / 16 -

Fig. 3: Verification of differential expression
of human MAL2 by quantitative RT-PCR



-4/ 16 -

Fig. 4: Verification of differential expression of MAL2 by quantitative PCR



-5/ 16 -

Fig. 5 : SEQ ID NO: 1,
amino acid sequence of
human MAL2 protein

Length: 176 aa

```
1 MSAGGASVPP PPNPAVSFPP PRVTLPAGPD ILRTYSGAFV CLEILFGGLV
51 WILVASSNVP LPLLQGWVMF VSVTAFFSL LFLGMFLSGM VAQIDANWNF
101 LDFAYHFTVF VFYFGAFLLE AAATSLHDLH CNTTITGQPL LSDNQYNINV
151 AASIFAFMTT ACYGCSLGLA LRRWRP
```

-6/ 16-

Fig. 6: SEQ ID NO: 2,
nucleotide sequence of
human MAL2 cDNA

Length: 2808 bp

```

1 GGCGGCGGCG GCAGGAGCCC GGGAGGCAGA GGCAGGGAGGC GGCAGGGCG
51 CGCGGAGACG CAGCAGCGGC AGCGGCAGCA TGTCGGCCGG CGGAGCGTCA
101 GTCCCCGCCGC CCCCGAACCC CGCCGTGTCC TTCCCGCCGC CCCGGGTAC
151 CCTGCCCGCC GGCCCCGACA TCCTGCGGAC CTACTCGGGC GCCTCGTCT
201 GCCTGGAGAT TCTGTTGGG GGTCTTGTCT GGATTTGGT TGCCTCCTCC
251 AATGTTCTC TACCTCTACT ACAAGGATGG GTCATGTTG TGTCCGTGAC
301 AGCGTTTTC TTTCGCTCC TCTTCTGGG CATGTTCTC TCTGGCATGG
351 TGGCTCAAAT TGATGCTAAC TGGAACTTCC TGGATTTGC CTACCATTT
401 ACAGTATTG TCTTCTATTG TGGAGCCTT TTATTGGAAG CAGCAGCCAC
451 ATCCCTGCAT GATTTGCATT GCAATACAAC CATAACCAGG CAGCCACTCC
501 TGAGTGATAA CCAGTATAAC ATAAACGTAG CAGCCTCAAT TTTGCCTT
551 ATGACGACAG CTGTTATGG TTGAGCTTG GGTCTGGCTT TACGAAGATG
601 GCGACCGTAA CACTCCTTAG AAACCTGGCAG TCGTATGTTA GTTCACTTG
651 TCTACTTAT ATGTCGATC AATTGGATA CCATTTGTC CAGATGCAA
701 AACATTCAA AAGTAATGTG TTTAGTAGAG AGAGACTCTA AGCTCAAGTT
751 CTGGTTATT TCATGGATGG AATGTTAATT TTATTATGAT ATTAAAGAAA
801 TGGCCTTTA TTTACATCT CTCCCTTTT TCCCTTCCC CCTTTATTT
851 CCTCCCTTTC TTCTGAAAG TTTCTTTA TGTCCATAAA ATACAAATAT
901 ATTGTTCATC AAAAATTAGT ATCCCTTTG TTTGGTTGCT GAGTCACCTG
951 AACCTTAATT TTAATTGGTA ATTACAGCCC CTAAAAAAA CACATTCAA
1001 ATAGGCTTCC CACTAAACTC TATATTCTAG TGTAACCAG GAATTGGCAC
1051 ACTTTTTTA GAATGGGCCA GATGGTAAAT ATTTATGCTT CACGGTCCAT
1101 ACAGTCTCTG TCACAACAT TCAGTTCTGC TAGTATAGCG TGAAAGCAGC
1151 TATACACAAT ACAGAAATGA ATGAGTGTGG TTATGTTCTA ATAAAACCTA
1201 TTTATAAAA CAAGGGGAGG CTGGGTTAG CCTGTGGGCC ATAGTTGTC
1251 AACCACTGGT GTAAAACCTT AGTTATATAT GATCTGCATT TTCTTGAAC
1301 GATCATTGAA AACTTATAAA CCTAACAGAA AAGCCACATA ATATTTAGTG
1351 TCATTATGCA ATAATCACAT TGCCTTGTG TTAATAGTC AATACTTACC
1401 TTTGGAGAAT ACTTACCTT GGAGGAATGT ATAAAATTTC TCAGGCAGAG
1451 TCCTGGATAT AGGAAAAAGT AATTATGAA GTAAACTTCA GTTGCTTAAT
1501 CAAACTAATG ATAGTCTAAC AACTGAGCAA GATCTCATC TGAGAGTGCT
1551 TAAAATGGGA TCCCCAGAGA CCATTAACCA ATACTGGAAC TGGTATCTAG
1601 CTACTGATGT CTTACTTTGA GTTATTTAT GCTTCAGAAT ACAGTTGTT
1651 GCCCTGTGCA TGAATATACC CATATTGTG TGTGGATATG TGAAGCTTT
1701 CCAAATAGAG CTCTCAGAAG ATTAAGTT TTACTTCTAA TTATTTGCA
1751 TTACTTGAG TTAATTGTA ATAGAGTATT AAATATAAG TTGTAGATT
1801 TTATGTGTT TTGTATTAGC CCAGACATCT GTAATGTTT TGCACGGTG
1851 ACAGACAAAA TCTGTTTAA AATCATATCC AGCACAAAAA CTATTTCTGG
1901 CTGAATAGCA CAGAAAAGTA TTTAACCTA CCTGTAGAGA TCCTCGTCAT
1951 GGAAAGGTGC CAAACTGTT TGAATGGAAG GACAAGTAAG AGTGAGGCCA
2001 CAGTTCCCAC CACACGAGGG CTTTGTATT GTTCTACTTT TTCAGCCCTT
2051 TACTTCTGG CTGAAGCATC CCCTTGGAGT GCCATGTATA AGTTGGCTA
2101 TTAGAGTTCA TGGAACATAG AACAAACCATG AATGAGTGGC ATGATCCGTG
2151 CTTAATGATC AAGTGTACT TATCTAATAA TCCTCTAGAA AGAACCTGT
2201 TAGATCTTGG TTTGTGATAA AAATATAAAAG ACAGAAGACA TGAGGAAAAA

```

- 7 / 16 -

2251 CAAAAGGTTT GAGGAATCA GGCATATGAC TTTATACTTA ACATCAGATC
2301 TTTCTATAA TATCCTACTA CTTGGTTT CCTAGCTCCA TACCACACAC
2351 CTAAACCTGT ATTATGAATT ACATATTACA AAGTCATAAA TGTGCCATAT
2401 GGATATACAG TACATTCTAG TTGGAATCGT TTACTCTGCT AGAATTAGG
2451 TGTGAGATT TTTGTTCCC AGGTATAGCA GGCTTATGTT TGGTGGCATT
2501 AAATTGGTTT CTTTAAATG CTTGGTGGC ACTTTGTAA ACAGATTGCT
2551 TCTAGAITGT TACAAACCAA GCCTAAGACA CATCTGTGAA TACTTAGATT
2601 TGTAGCTAA TCACATTCTA GACTTGTGAG TTGAATGACA AAGCAGTTGA
2651 ACAAAAATTA TGGCATTTAA GAATTTAAC A TGCTTAGCT GTAAAAATGA
2701 GAAAGTGTG GTTGGTTTA AAATCTGGTA ACTCCATGAT GAAAAGAAAT
2751 TTATTTATA CGTGTATGT CTCTAATAAA GTATTCAATT GATAAAAAAA
2801 AAAAAAAA

- 8 / 16 -

Fig. 7: SEQ ID NO: 3

Length: 270 bp

```
1 TGGTGGCACT TTTGTAACACA GATTGCTTCT AGATTGTTAC AAACCAAGCC
51 TAAGACACAT CTGTGAATAAC TTAGATTTGT AGCTTAATCA CATTCTAGAC
101 TTGTGAGTTG AATGACAAAG CAGTTGAACA AAAATTATGG CATTAAAGAA
151 TTTAACATGT CTTAGCTGTA AAAATGAGAA AGTGTGGTT GGTTTTAAAA
201 TCTGGTAACT CCATGATGGA AAGAAATTAA TTTTATACGT GTTATGTCTC
251 TAATAAAGTA TTCATTTGAT
```

- 9 / 16 -

Fig. 8: SEQ ID NO: 4,
nucleotide sequence of
human MAL2 coding sequence

Length: 531 bp

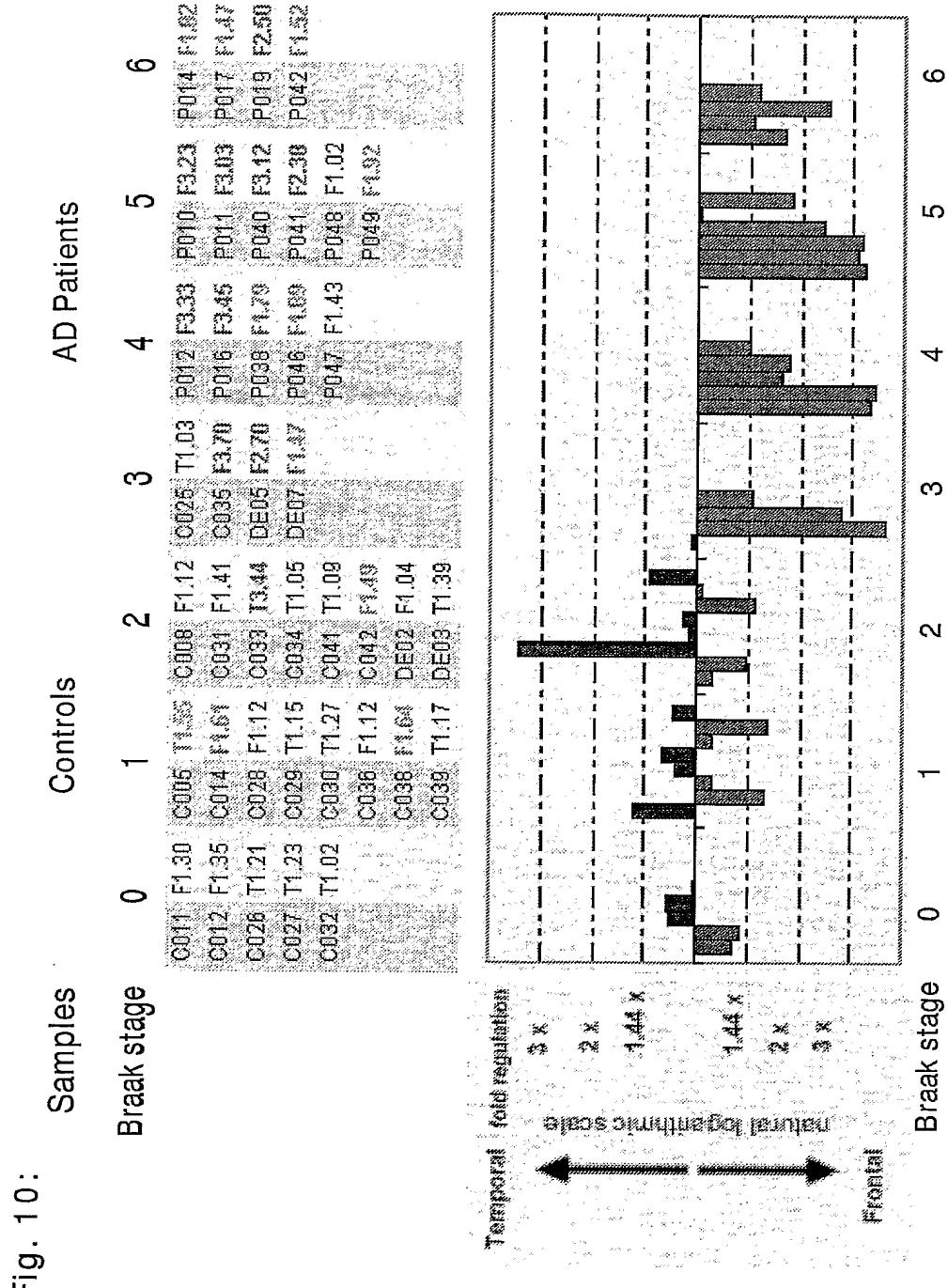
1 ATGTCGGCCG GCGGAGCGTC AGTCCCGCCG CCCCCGAACC CCGCCGTGTC
51 CTTCCCGCCG CCCCGGGTCA CCCTGCCCGC CGGCCCGGAC ATCCTGCAGA
101 CCTACTCGGG CGCCTTCGTC TGCCTGGAGA TTCTGTTCGG GGGTCTTGTC
151 TGGATTTGG TTGCCTCCTC CAATGTTCCCT CTACCTCTAC TACAAGGATG
201 GGTCAATGTT GTGTCCGTGA CAGCGTTTT CTTTTCGCTC CTCTTCTGG
251 GCATGTTCTT CTCTGGCATG GTGGCTCAA TTGATGCTAA CTGGAACCTC
301 CTGGATTTG CCTACCATT TACAGTATT GTCTTCTATT TTGGAGCCTT
351 TTTATTGGAA GCAGCAGCCA CATCCCTGCA TGATTTCGAT TGCAATACAA
401 CCATAACCGG GCAGCCACTC CTGAGTGATA ACCAGTATAA CATAAACGTA
451 GCAGCCTCAA TTTTGCCTT TATGACGGACA GCTTGTATG GTTGCAGTTT
501 GGGTCTGGCT TTACGAAGAT GGCGACCGTA A

-10/16-

Fig. 9: Alignment of SEQ ID NO: 2
with SEQ ID NO: 3

Length: 270 bp

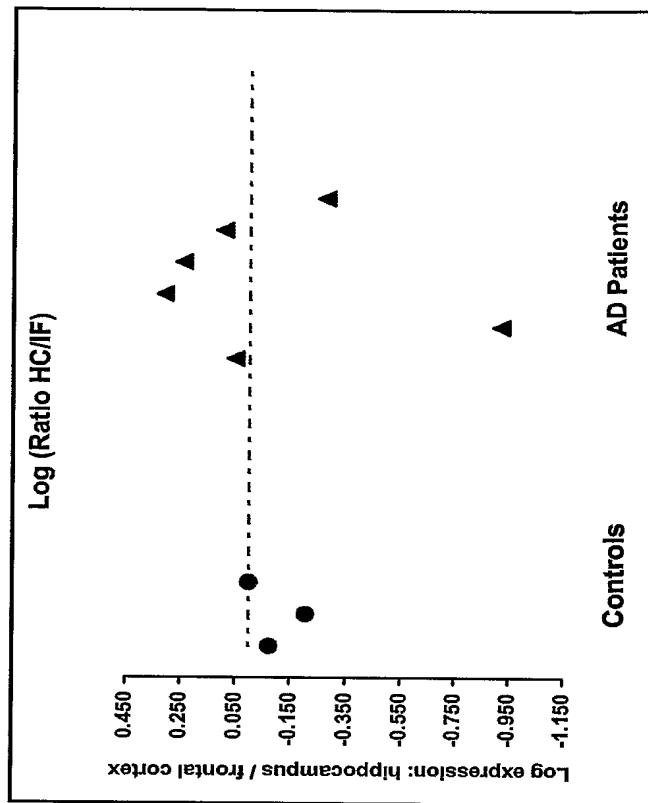
- 11 / 16 -



- 12 / 16 -

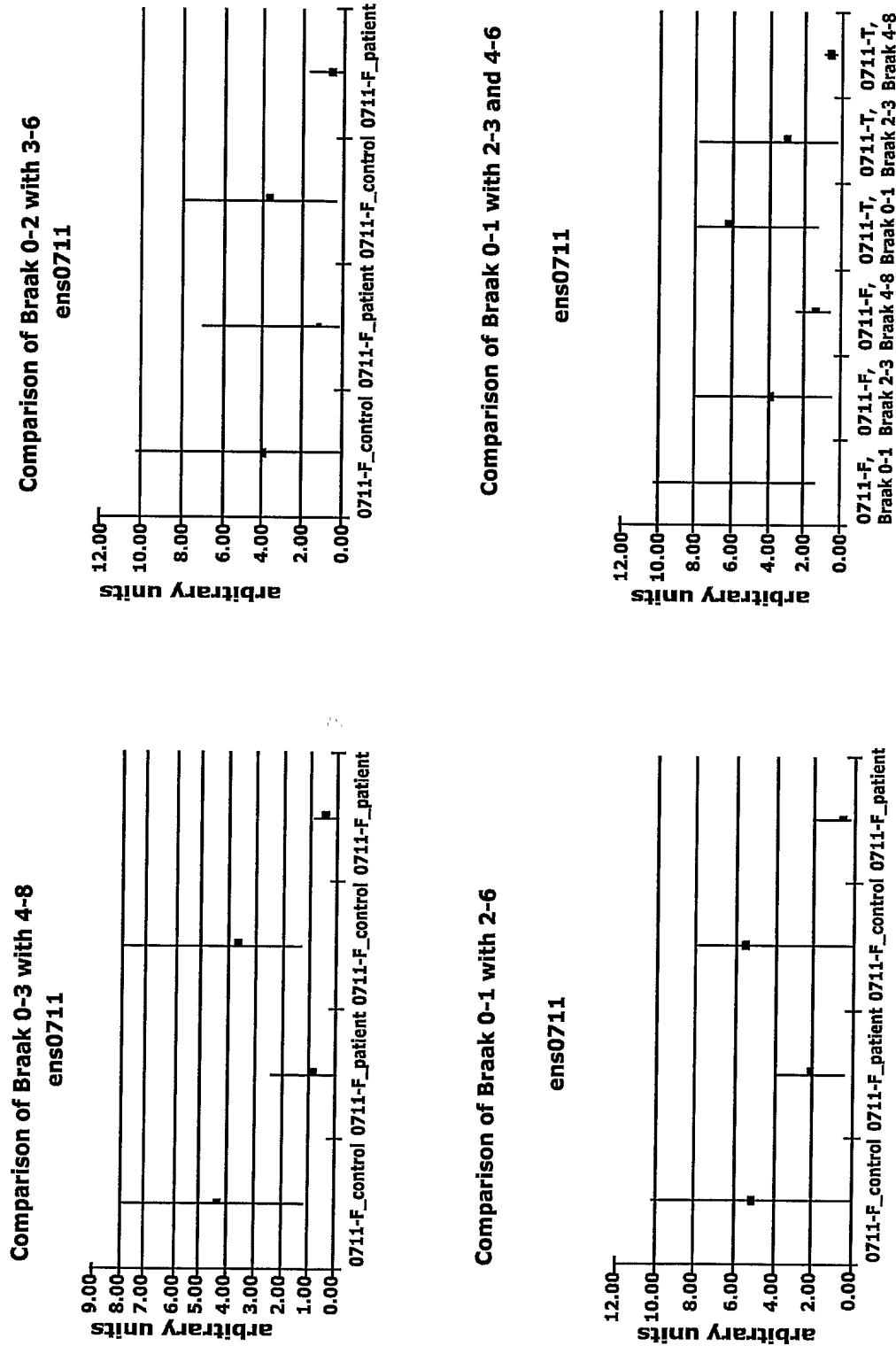
Fig. 11:

sample	Δ (fold) (hippocampus/ frontal cortex)
control C005	0.84
control C008	0.62
control C004	1.00
patient P012	1.13
patient P016	0.12
patient P010	2.04
patient P011	1.74
patient P014	1.24
patient P019	0.53



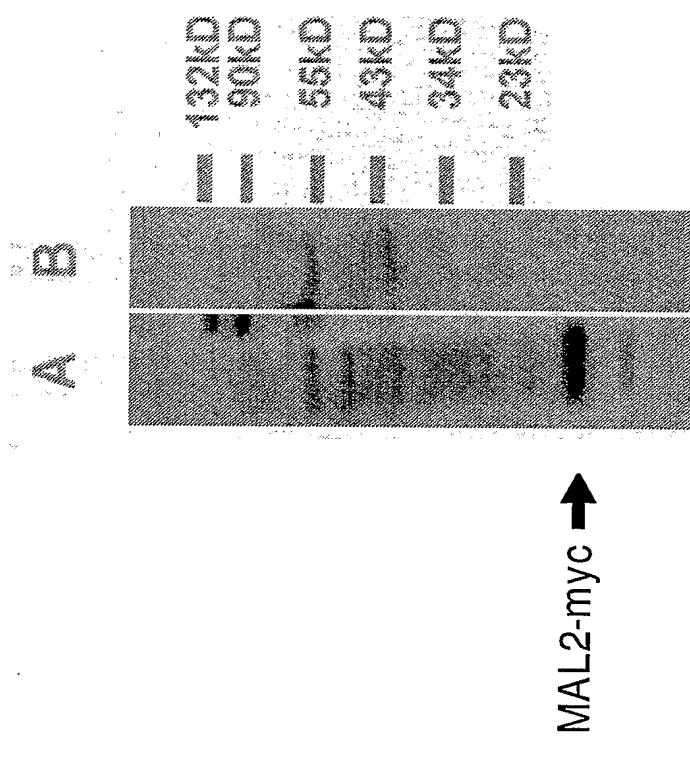
- 13/16 -

Fig.12: Analysis of absolute mRNA expression of MAL2



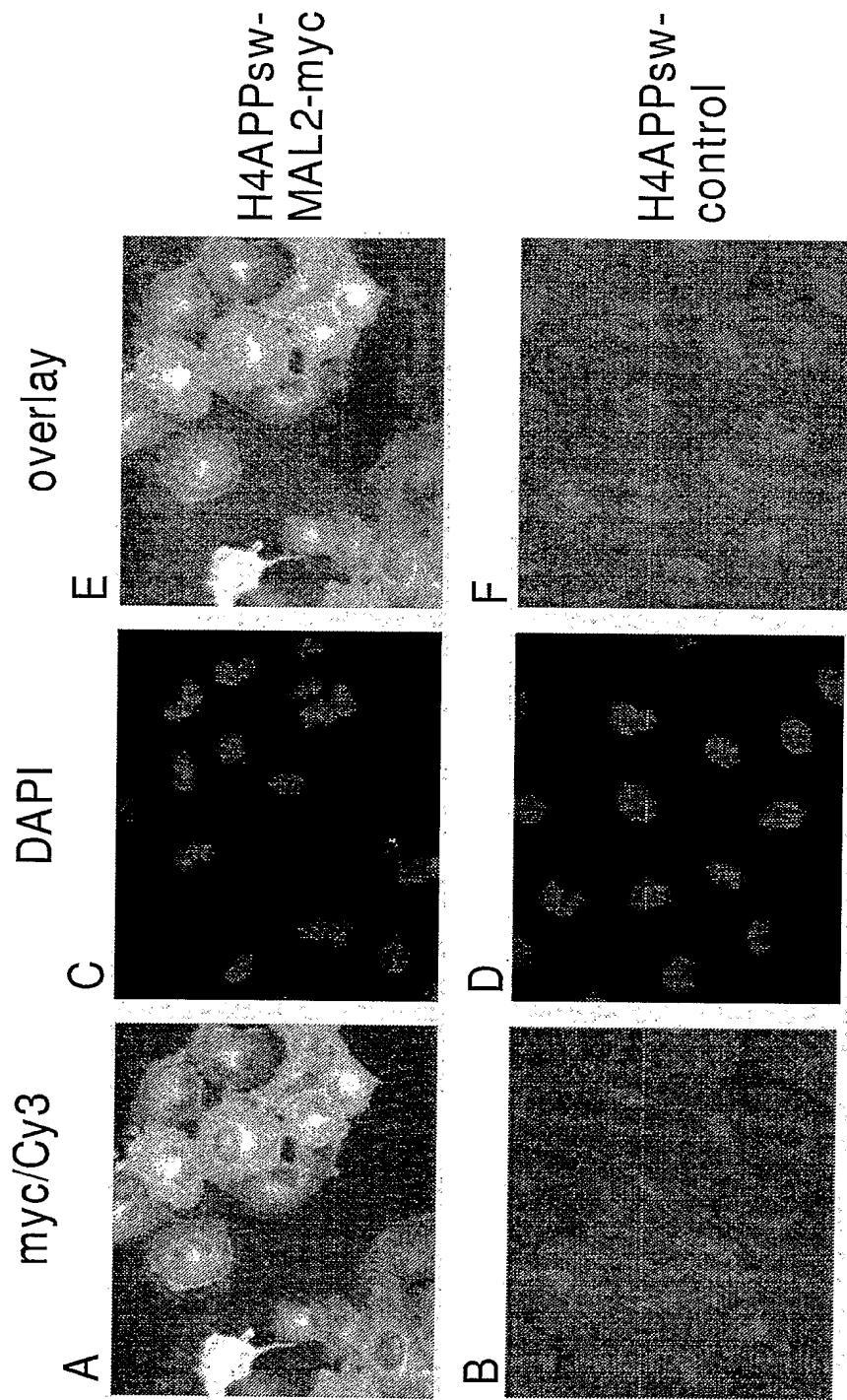
- 14 / 16 -

Fig. 13: Western Blot of H4APPsw cell protein extracts labeled with anti-MAL2-myc antibodies



- 15 / 16 -

Fig. 14: Immunofluorescence analysis of
MAL2 protein in neuroglioma cells



- 16 / 16 -

Fig. 15: Images of human pre-central brain sections labeled with anti-MAL2 antibodies and with DAPI

